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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,628	04/05/2000	Nancy E. Iwamoto	30-5010(4962)	6586

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EXAMINER
FEELY, MICHAEL J

ART UNIT	PAPER NUMBER
1712	19

DATE MAILED: 06/11/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

TC-14

Office Action Summary	Application No.	Applicant(s)	
	09/543,628	IWAMOTO, NANCY E.	
	Examiner	Art Unit	
	Michael J Feely	1712	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *22 April 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☒ Claim(s) *1-9* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 April 2000* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Objections

1. The objection to claims 1-9 has been overcome by amendment.

2. Claims 1-9 are objected to because of the following informalities: claim 1 recites, "an adduct of glycol ether *or* a bisphenol glycol epoxy. The Specification (page 8, line 4) recites "an adduct of glycol ether *and* a bisphenol glycol epoxy. Because an "adduct" is a reaction product of two species, the specification language is viewed as proper, and the claim language is view as a typographical error. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The rejection of claims 1 and 7-9 under 35 U.S.C. 112, first paragraph, for the reasons set forth in paper #9, has been withdrawn.

5. The rejection of claims 2-6 under 35 U.S.C. 112, first paragraph, stands for the reasons set forth in paper #9.

The specification discloses that the R groups can comprise: an *adduct*, i.e., chemical addition product, of a glycol ether and an oxybis (cyclopentene oxide) (page 8, lines 3-7), not an oxybis (cyclopentene oxide) group (claim 2); an *adduct*, i.e., chemical addition product, of an epoxy glycol and an oxydianiline (page 8, lines 3-7), not an oxydianiline group (claim 3); an *adduct*, i.e., chemical addition product, of a glycol ether and a bisphenol glycol epoxy (page 8, lines 3-7) not a bisphenol A glycidyl epoxy group (claim 4). The specification discloses: a

chemical precursor used to form the polymer and/or the substrate including bis 3,4 epoxycyclohexylmethyl adipate (page 14, lines 11-16), not a polymer of claim 1 comprising a bis 3,4 epoxycyclohexylmethyl adipate group (claim 5); a chemical precursor used to form the polymer and/or the substrate including a trishydroxyethylisocyanurate (page 14, lines 11-16), not a polymer comprising a trishydroxyethylisocyanurate group (claim 6). The specification fails to enable one skilled in the art to make the claimed structures and polymers of claims 2-6.

6. Claims 1-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. The amended claim 1 recites, "an electronic device comprising a component that comprises *a polymer that comprises a monomer*," (of the given formula). Substituent groups R_a, R_b, and R_c are independently selected from the group consisting of: a hydroxylated aliphatic side chain; an epoxy glycol; and ethoxy ether; a glycol ether; an adduct of glycol ether *and* a bisphenol glycol epoxy; an adduct of an epoxy glycol and an amine such as oxydianiline to form a hydroxylamine; an adduct of a glycol ether and a cycloaliphatic epoxy; and an adduct of hydroxyethyl side chain and a cycloaliphatic epoxy. As claimed, the R groups are reactive groups, which would provide reactive sites for a polymerization reaction to take place; however, in the polymer form, some or all of these reactive sites would not exist as disclosed. Rather than a structure comprising a monomer having these specific R groups, the claimed polymer would be more accurately depicted as a polymer comprising "residues" of this monomer structure, wherein the resides constitute repeating units of a the polymer structure. As claimed, the monomer structure is an un-reacted compound and exists as an independent structure. A polymer

comprises a series of repeating units, which are derived from monomers; a polymer is not a series of un-reacted monomers.

Specification

7. The following is a quotation of the first paragraph of 35 USC §112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same, and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of 37 CFR §1.71(a):

> (a) The specification must include a written description of the invention or discovery and of the manner and process of making and using the same, and is required to be in such full, clear, concise, and exact terms as to enable any person skilled in the art or science to which the invention or discovery appertains, or with which it is most nearly connected, to make and use the same.

The specification is objected to under 37 CFR §1.71 because: the Specification fails to adequately describe the polymer structure of claim 1, and the Specification fails to provide support for the limitations set forth in claims 2-6.

Claim Rejections - 35 USC § 102

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

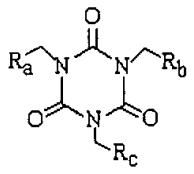
> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

9. The rejection of claims 1 and 6-9 under 35 U.S.C. 102(b) as being anticipated by Kurihara et al. (US Pat. No. 4,366,062) has been withdrawn.

10. The rejection of claim 1 under 35 U.S.C. 102(b) as being anticipated by Hitachi Chem Co LTD (JP 01225641 A), has been withdrawn.

11. Claims 1, and 6-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Chetcuti (US Pat No. 5,393,606).

Regarding claim 1, Chetcuti disclose an electronic device comprising a component (column 11, line 65 through column 12, line 18), that comprises a polymer (column 5, lines 1-5) that *comprises a repeating unit derived from a monomer* having the general formula:



wherein each of R_a, R_b, R_c are independently selected from the group consisting of: a hydroxylated aliphatic side chain; an epoxy glycol; an ethoxy ether; a glycol ether; an adduct of glycol ether *and* a bisphenol glycol epoxy; and adduct of an epoxy glycol and an amine; an adduct of a glycol ether and a cycloaliphatic epoxy; and an adduct of hydroxyethyl side chain and cycloaliphaptic epoxy (column 8, lines 18-21, 46, and 52-53); wherein the electronic device further comprises an interface between the first polymer and a substrate (column 10, lines 17-20); wherein the electronic device comprises an interface between the first polymer and a second polymer (column 10, lines 36-41); and wherein the first polymer and second polymer are chemically different from one another (column 10, lines 36-41).

Response to Arguments

12. Applicant's arguments filed March 19, 2002 have been fully considered but they are not persuasive.

In response to the enablement rejection of claims 1-9, Applicant argues that the reaction products of the monomers listed would form the "first polymer" given the definition the

definition of "monomer" on page 8 of the specification. It should be noted that the R groups set forth in the instant invention provide reactive sites for providing repetitive covalent bonds (polymerization). Instant claim 1 recites that the polymer comprises the monomer comprising these specific R groups. The polymer cannot comprise this monomer because the monomer structure as claimed exists only as a monomer. It has the potential polymerize, but he structure itself cannot be part of a polymer. A polymer formed from such a monomer would not comprise a monomer; rather, it would comprise a residue of the monomer in the form of a repeating unit. As a result, claims 1-9 are not enabled, and the argument presented by the Applicant is not persuasive.

In response to the enablement rejection of claims 2-6, Applicant argues, "the group selected from oxybis(cyclopentene oxide), oxydianiline, Bisphenol A glycidyl epoxy, and bis 3,4 epoxycyclohexylmethyl adipate is referred to on page 8 of the original specification, lines 3-7. All of these compounds are listed in the specification on page 8 as specific examples for the R_a, R_b, and R_c groups." This is not the case. The specification discloses, "R_a, R_b, R_c comprises a hydroxylated aliphatic side chain; an epoxy glycol; and ethoxy ether; a glycol ether; an *adduct* of glycol ether and a bisphenol glycol epoxy; an *adduct* of an epoxy glycol and an amine such as oxydianiline to form a hydroxylamine; an *adduct* of a glycol ether and a cycloaliphatic epoxy such as oxybiscyclopentene oxide; an *adduct* of hydroxyethyl side chain and a cycloaliphatic epoxy such as oxybiscyclopentene," (page 8, lines 3-7). These adduct groups are the chemical addition products of specific components. These adduct groups are formed from compounds such as oxybis(cyclopentene oxide), oxydianiline, and Bisphenol A glycidyl epoxy; however, these compounds alone, do not constitute the R groups. Furthermore, page 8 makes no reference

to bis 3,4 epoxycyclohexylmethyl adipate. As a result, claims 2-6 are not enabled, and the argument presented by the Applicant is not persuasive.

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kato et al. (US Pat. No. 6,180,742), Von Gentzkow et al. (US Pat. No. 6,201,074), and Saida et al. (US Pat. No. 5,959,256) disclose electronic components comprising polymers comprising isocyanurate structures.

14. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael J Feely whose telephone number is 703-305-0268. The examiner can normally be reached on M-F 8:30 to 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Dawson can be reached on 703-308-2340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

Michael J. Feely
June 4, 2002

Robert Dawson
Supervisory Patent Examiner
Technology Center 1700